

5

10

20

25

30

35

40

45

1. A filter comprising:

a plurality of pleats, at least one pleat including a pair of pleat legs and a pleat tip region, wherein a thickness of the pleat tip region at a point spaced about one to four pleat leg thicknesses from the end of the pleat tip region is less than or equal to about twice the pleat leg thickness.

2. A filter comprising:

a plurality of pleats, at least one pleat including a pair of pleat legs and a pleat tip region, wherein a thickness of the pleat tip region at a point spaced about one to four pleat leg thicknesses from the end of the pleat tip region is less than or equal to a distance between corresponding points on opposing outer surfaces of the pleat legs.

15 3. A filter comprising:

a pleated structure having a plurality of pleats and more than one layer, at least one of the pleats having a reformed pleat tip region.

4. A filter comprising:

a pleated structure having a plurality of pleats and a pair of pleat legs, at least one of the pleats having a reformed pleat tip region and contacting pleat legs.

5. A filter comprising:

a plurality of pleats, at least one pleat including a pleat tip region having contacting inner surfaces.

6. A filter comprising:

a pleated porous sheet having a polymeric material and a plurality of pleats, at least one pleat including a pair of pleat legs and a pleat tip region, wherein the sheet includes a pre-scored region at the pleat tip region.

7. A method of making a filter comprising:

forming a plurality of pleats having pleat tip regions; and applying pressure to opposing outer surfaces of at least one pleat tip region.

8. A method of making a filter comprising:

forming a plurality of pleats free of bulbous pleat tip regions.

9 A method of making a filter comprising:

forming a plurality of pleats wherein a thickness of each pleat tip region at a point spaced about one to about four pleat leg thicknesses from the end of the pleat tip region is less than or equal to about twice the pleat leg thickness.

10. A method of making a filter comprising:

forming a plurality of pleats wherein a thickness of each pleat tip region at a point spaced about one to about four pleat leg thicknesses from the end of the pleat tip region is less than or equal to a distance between corresponding points on opposing outer surfaces of the pleat legs.

5

10

A

A

A

- 11. A method of making a filter comprising:
  scoring a porous sheet including a polymeric material; and
  pleating the porous sheet.
- 12. An apparatus comprising: one or more dies arranged to reform a pleat tip region of a pleat.
- 13. A filter made by the method or apparatus of any of claims 7-12.
- 14. The filter, method or apparatus of any of the preceding claims wherein the filter includes pleat legs generally parallel to each other.
- A 15. The filter, prethod or apparatus of any of the preceding claims wherein the filter comprises a fluoropolymeric material.
  - 16. The filter, method or apparatus of any of the preceding claims wherein the filter includes more than one layer.